



PATENTS
Docket No. 89B010

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

PATENT APPLICATION

Applicant : Jo Ann M. Canich
Serial No. : 07/676,690
Filed : March 28, 1991
For : OLEFIN POLYMERIZATION CATALYSTS
Group Art Unit : 1505
Examiner : David Wu

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Baytown, Texas 77522
July 24, 1992

Hon. Commissioner of Patents
and Trademarks
Washington, D.C. 20231

RESPONSE TO EXAMINER'S ACTION

Sir:

In response to the Examiner's Action, dated April 27, 1992, applicant respectfully requests that the Examiner consider the following remarks:

REMARKS

Claims 18-33 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-13 of U.S. Patent No. 5,026,798 (the '798 patent). The Examiner states that while the "conflicting claims are not identical, they are not patentably distinct from each other because the inventive subject matters are overlapping." Applicant respectfully traverses this rejection; but, for purposes of expediting prosecution, applicant submits herewith a terminal disclaimer over the '798 patent.

Applicant traverses this rejection because the subject matter of the '798 patent is patentably distinct from the

subject matter of this application. The '798 patent discloses a method for making crystalline poly-alpha-olefins. The catalyst system for making those crystalline products requires a Group IV-B transition metal component that has a covalent bridging group (T) containing a Group IV-A or V-A element.

Applicant asserts that such bridged compounds used in the disclosed polymerization process of the '798 patent are patentably distinct from the genus of bridged or unbridged compounds used in the polymerization process of this application. Specifically, the addition of a bridge to the Group IV-B transition metal component of the catalyst limits ligand mobility and rotational freedom, and kinetically stabilizes the ligand to metal bonding. These features are not available without the bridge.

Also, changing the size of the bridge produces specific catalysts that produce specific polymers. For example, a long bridge causes the ligands to hide or block the metal atom (e.g., increases steric crowding), which limits monomer access to the active metal site. A short bridge causes the ligands to be pulled closer to each other (e.g., decreases steric crowding), thereby "opening up" the metal atom to larger coordination site(s) (and larger monomers), again changing the access to the active metal site. In this fashion the bridged species allows design of catalysts that produce polymers with particular properties because the approach of the monomer to the polymerization site is controlled.

Thus, while the '798 patent discloses a polymerization process for making crystalline poly-alpha-olefins, this specifically designed process and catalyst is patentably distinct from the genus being claimed in this application. Therefore, applicant respectfully submits that claims 18-33 do

not constitute obviousness-type double patenting with claims 1-13 of the '798 patent. Applicant requests that the rejection be withdrawn.

Nonetheless, for purposes of expediting prosecution, applicant submits herewith a terminal disclaimer over the '798 patent. Should the Examiner favorably consider applicant's above remarks, applicant requests that the submitted disclaimer not be entered.

CONCLUSION

For the reasons stated above, applicant respectfully requests that the Examiner reconsider this application and issue a notice of allowance for all the pending claims.

Respectfully submitted,



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